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What is claimed is:

1. DNA plasmid (ATCC \_\_\_\_\_) designated as BL21/DE3(8,9 PST) containing the neuS gene from *escherichia coli* K92 and encoding  $\alpha 2,8/2,9$  polysialyltransferase from *escherichia coli* K92.

2. A transformed cell having a gene encoding  $\alpha 2,8/2,9$  polysialyltransferase from *escherichia coli* K92.

3. A process for obtaining purified  $\alpha 2,8/2,9$  polysialyltransferase comprising the following steps:

Step A: expressing a gene encoding  $\alpha 2,8/2,9$  polysialyltransferase within a transformed cell having said gene for producing said  $\alpha 2,8/2,9$  polysialyltransferase; and then

Step B: isolating the  $\alpha 2,8/2,9$  polysialyltransferase expressed in said Step A.

4. A process according to claim 3 wherein the  $\alpha 2,8/2,9$  polysialyltransferase is from *escherichia coli* K92.

5. Purified recombinant  $\alpha 2,8/2,9$  polysialyltransferase.

6. Purified recombinant  $\alpha 2,8/2,9$  polysialyltransferase according to claim 5 wherein the  $\alpha 2,8/2,9$  polysialyltransferase is from *escherichia coli* K92.

7. A method for converting a substrate of  $\alpha 2,8/2,9$  polysialyltransferase into a product, said method comprising the step of contacting the substrate with  $\alpha 2,8/2,9$  polysialyltransferase under conditions for promoting enzymic catalysis of a conversion

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of the substrate into the product.

8. A method according to claim 7 wherein the  $\alpha$ 2,8/2,9 polysialyltransferase is from *escherichia coli* K92.

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